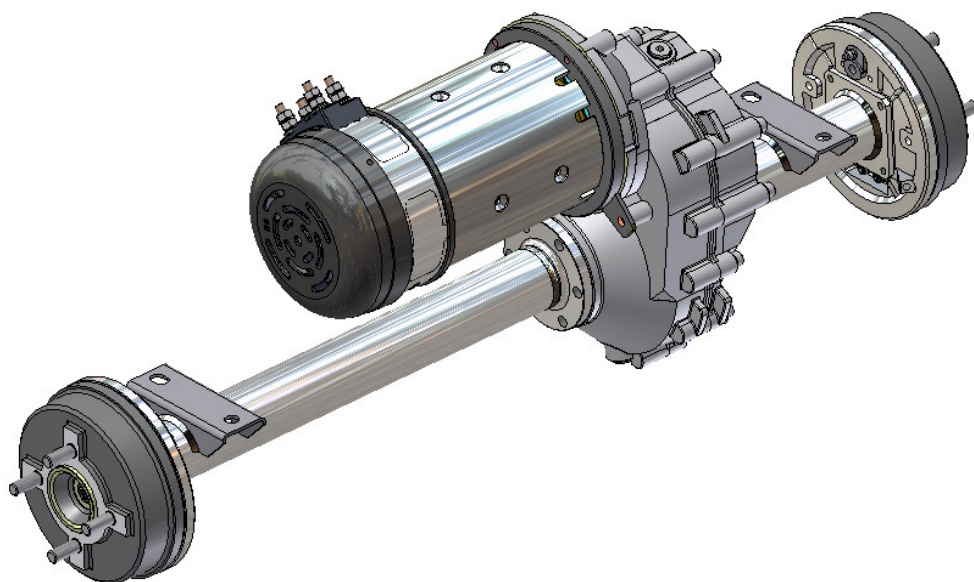


metalrota s.r.l.

- **PONTI DIFFERENZIALI**
- *DIFFERENTIAL UNITS*



dal 1965

Via Bulgaria, 46 - 41100 MODENA – ITALY
Tel. +39.059.315204 - Fax +39.059.450439
www.metalrota.it - E-mail: info@metalrota.it

ITALIANO

PRESENTAZIONE

La gamma dei ponti differenziali proposti da METALROTA s.r.l. è provvista di un motore elettrico con una potenza che varia da 250W fino a 8000W, disponibile con diversi mozzi-ruota, diversi ingranaggi per la doppia velocità con e senza carico, freni idraulici o meccanici, freni a disco e di stazionamento con differenti configurazioni. METALROTA s.r.l. può progettare la giusta soluzione personalizzando la lunghezza della carreggiata del tuo veicolo (carrelli elettrici, trattori agricoli, trattorini per serre, piattaforme, trattori da rimorchio, macchine lavapavimenti, apparecchiature speciali, AGV).

La gamma si divide in tre tipologie ognuna delle quali è mirata a caratteristiche d'uso ben precise. Il ponte differenziale SERIE 11 è utilizzato per equipaggiare veicoli elettrici come baby giocattoli, lavapavimenti, veicoli per disabili, carrelli per la movimentazione manuale ecc...

Il ponte differenziale SERIE 21 è particolarmente idoneo su piccoli trattorini all'interno di serre, per il giardinaggio, per veicoli da traino con carico medio-pesante ecc...

Il ponte differenziale SERIE 40 è impiegato per realizzare veicoli tipo quad, go-kart, city cars, carrelli da traino con carico pesante ecc...

Ogni ponte differenziale può essere fornito con diversi accessori o con solo il riduttore.

ENGLISH

PRESENTATION

The range of differential units supplied from METALROTA s.r.l. has electric motors from 250W up to 8000W, available with various wheel hubs, gear shifts for a double speed with and without load, hydraulic and mechanical drum brakes, disk brakes, parking brakes, with many different configurations and features. METALROTA s.r.l. can design the right track length for your vehicle (electric cart, agricultural machine, greenhouse cart, platform, tow tractor, cleaning machine, special equipment, AGV).

The range is divided in three groups each of them with its features of application.

The differential unit SERIE 11 is used to small electric cart like baby toys, cleaning machine, vehicles for disabled, manual handling truck etc...

The differential unit SERIE 21 is particular suitable to small tractor inside greenhouse, to gardening, tow vehicles with medium-heavy load etc...

The differential unit SERIE 40 is used to vehicles like quad, go-kart, city cars, tow vehicles with heavy load etc...

Every differential unit is available with various optionals or with only the gearbox.

CODICE DI ORDINAZIONE - ORDER CODE

S21 - 32 - 110

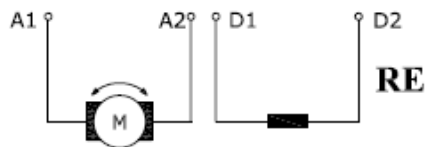
TIPO DIFFERENZIALE <i>DIFFERENTIAL TYPE</i>	
SERIE 11	S11
SERIE 21	S21
SERIE 40	S40

RAPPORTO DI RIDUZIONE <i>GEAR RATIO</i>	
SERIE 11	11:1
	25:1
	40:1
	50:1
	80:1
SERIE 21	10:1
	15:1
	20:1
	25:1
	32:1
SERIE 40	10:1
	12:1
	13:1
	15:1
	16:1
	18:1
	20:1

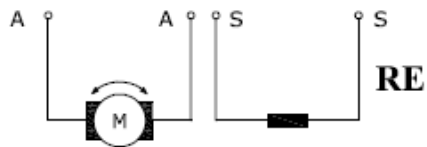
ATTACCO ALLA RUOTA <i>WHEEL FITTING</i>		
FRENO <i>BRAKE</i>	SERIE 11	D.110
	SERIE 21	D.110
		D.140
	SERIE 40	D.160
		D.185
		D.190
MONTAGGIO ESTERNO <i>(albero o flangia)</i> <i>EXTERNAL ASSEMBLY</i> <i>(shaft or flange)</i>	SERIE 11	ME
	SERIE 21	
	SERIE 40	

SCHEMI ELETTRICI MOTORI - *MOTOR CONNECTIONS*

Motori con eccitazione in serie - *series wound motors*

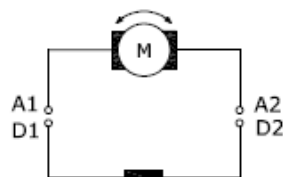


4 MORSETTI CON MORSETTIERA
4 TERMINALS WITH TERMINAL BOARD

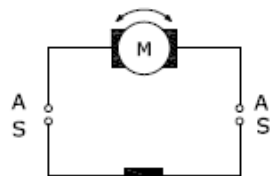


4 MORSETTI SENZA MORSETTIERA
4 TERMINALS WITHOUT TERMINAL BOARD

Motori con eccitazione parallela / separata - *shunt / sep-ex wound motors*

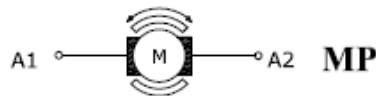


PB 4 MORSETTI CON MORSETTIERA
4 TERMINALS WITH TERMINAL BOARD

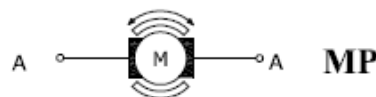


PB 4 MORSETTI SENZA MORSETTIERA
4 TERMINALS WITHOUT TERMINAL BOARD

Motori a magneti permanenti - *permanent magnet motors*

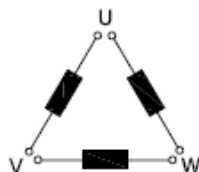


2 MORSETTI CON MORSETTIERA
2 TERMINALS WITH TERMINAL BOARD

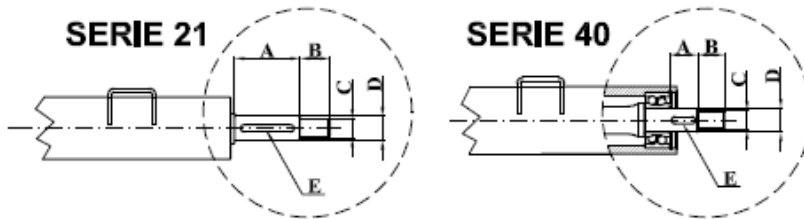


2 MORSETTI SENZA MORSETTIERA
2 TERMINALS WITHOUT TERMINAL BOARD

Motori con eccitazione in AC - *AC wound motors*

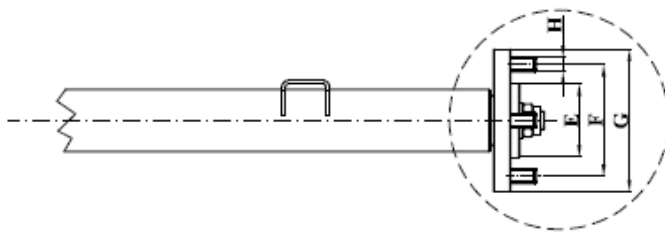


ATTACCO ALLA RUOTA - WHEEL FITTING



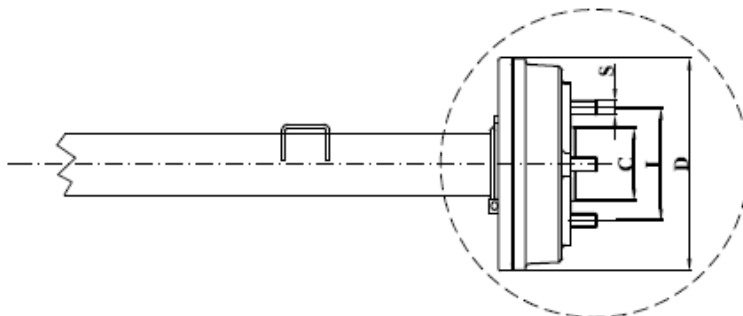
with shaft
(ME)

Tipo differenziale Differential type	A	B	C	D	E
SERIE 21	55	25	M16	20	6x6x45
SERIE 40	23,9	22,5	M16	20	6x6x20



with flange
(ME)

Tipo differenziale Differential type	Tipo flangia Flange type	BALILLA	BMW	FIAT	VESPA 4
SERIE 11 SERIE 21 SERIE 40	E	62	60	58	52
	F	95	100	98	70
	G	128	128	128	93
	H	n°4 - M12x1,5	n°4 - M16x1,5	n°4 - M12x1,5	n°4 - M10x1,5



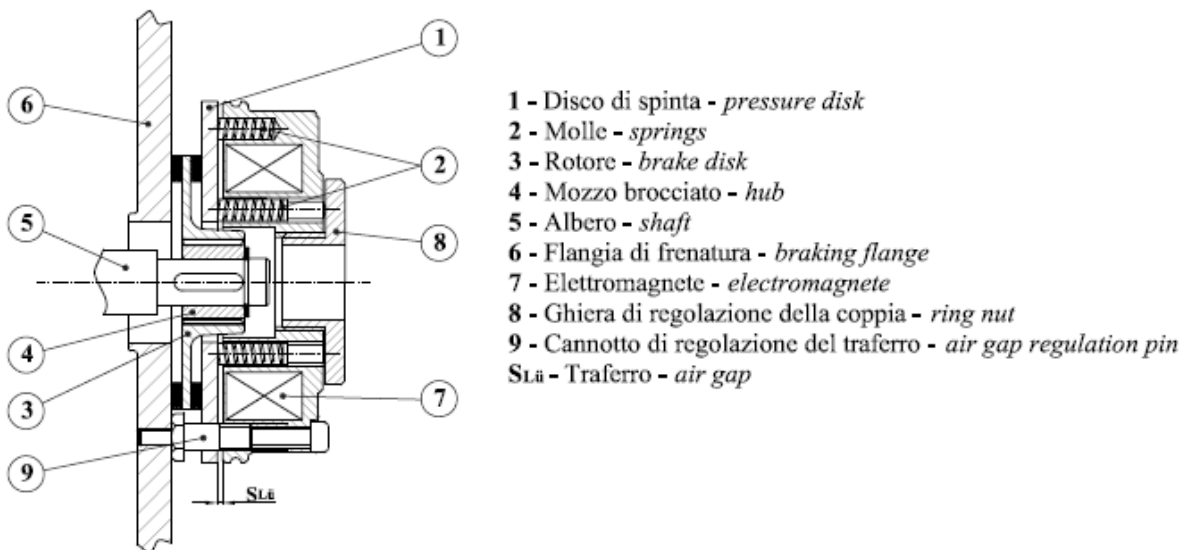
with brake
(110)
(140)
(160)
(185)

Tipo differenziale Differential type	Grandezza freno Brake size	C	I	D	S
SERIE 11 SERIE 21	D.110	63	90	130	n°3 - M10 a 120°
SERIE 21	D.140	58	98	156	n°4 - M12 a 90°
SERIE 40	D.160	58	98	183	n°4 - M12 a 90°
SERIE 40	D.185	58	98	217	n°4 - M12 a 90°

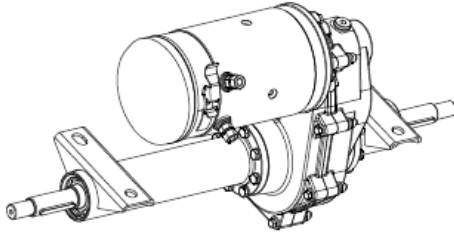
FRENI ELETTROMAGNETICI - *ELECTROMAGNETIC BRAKES*

A richiesta i motori possono essere forniti con freni elettromagnetici di marca **TELECO** o **LENZE**.
Nel catalogo sono illustrati i motori con freno **TELECO**; i freni **LENZE** sono disponibili come optional.

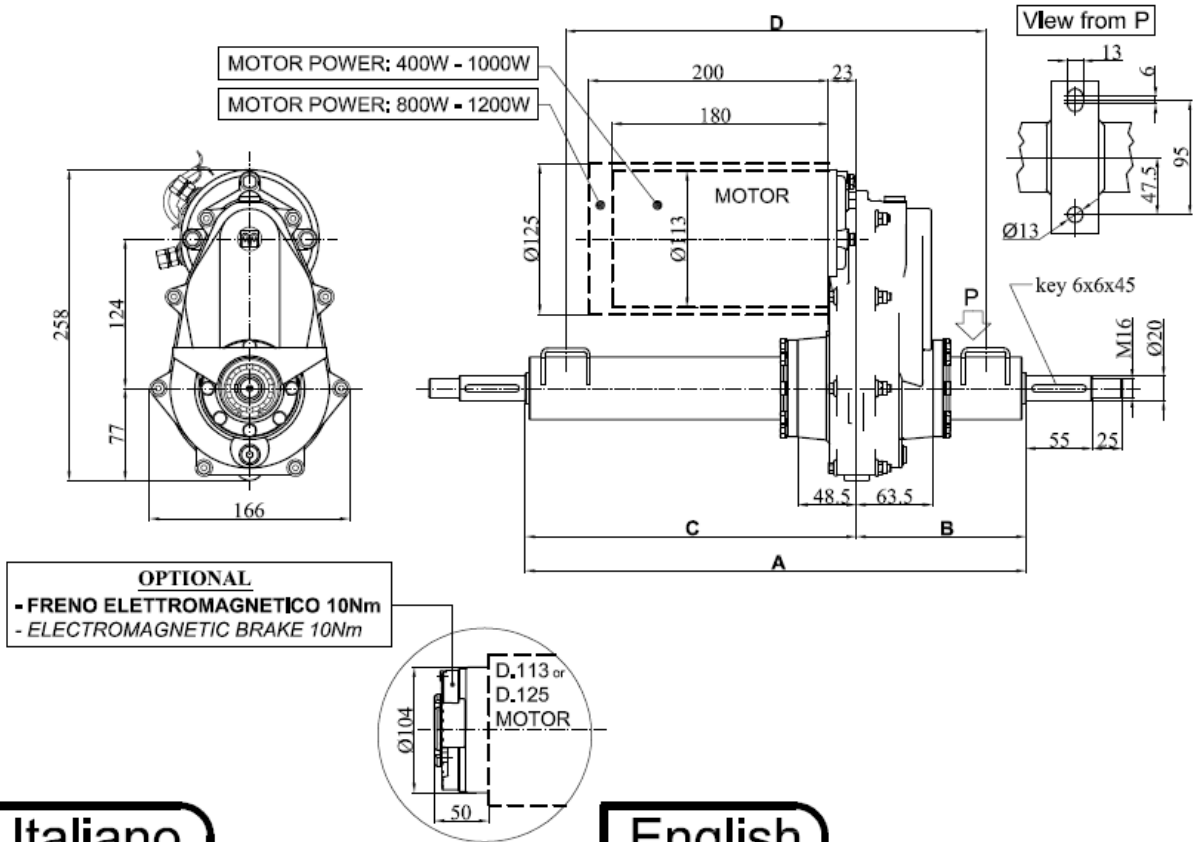
*On request, motors with TELECO or LENZE electromagnetic brakes are available.
The catalogue shows motors with TELECO brake; optional LENZE brake are available.*



	Modello/Type		06	08	10	12	14
TELECO	Coppia/Torque	Nm	5	10	20	40	75
LENZE	Coppia/Torque	Nm	4	8	16	32	60



S21-ME



Italiano

DATI TECNICI:

- Motore fino a 1500W - 24V/36V/48V
- Coppia massima in uscita 400Nm
- Rapporti di riduzione standard: 10:1 - 15:1 - 20:1 - 25:1 - 32:1
- Assale per trazione posteriore con carichi fino a 300kg
- Attacco alla ruota: tramite albero
- Carreggiata a richiesta cliente

MISURE A DISEGNO:

- **A** = min.400mm - max.900mm
- **B** = a richiesta
- **C** = a richiesta
- **D** = a richiesta

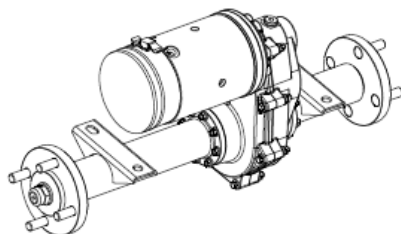
English

SPECIFICATIONS:

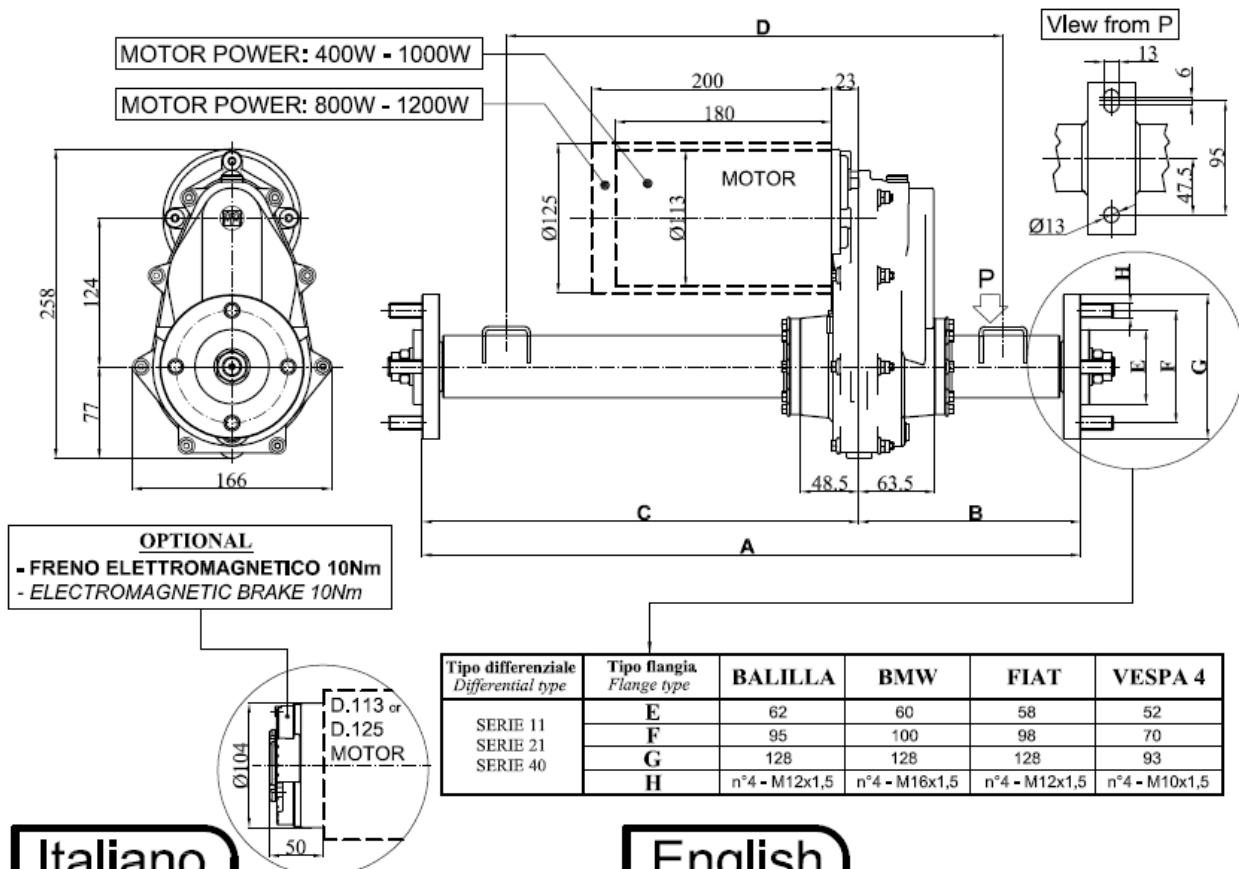
- Motor up to 1500W - 24V/36V/48V
- Maximum output torque 400Nm
- Standard gear ratios: 10:1 - 15:1 - 20:1 - 25:1 - 32:1
- Axle for rear drive for loads up to 300kg
- Wheel fitting: with shaft
- Track according to customer's requirements

DIMENSIONS TO DRAW:

- **A** = min.400mm - max.900mm
- **B** = according to customer's requirements
- **C** = according to customer's requirements
- **D** = according to customer's requirements



S21-ME



Italiano

DATI TECNICI:

- Motore fino a 1500W - 24V/36V/48V
- Coppia massima in uscita 400Nm
- Rapporti di riduzione standard: 10:1 - 15:1 - 20:1 - 25:1 - 32:1
- Assale per trazione posteriore con carichi fino a 300kg
- Attacco alla ruota: tramite flangia
- Carreggiata a richiesta cliente

MISURE A DISEGNO:

- **A** = min.400mm - max.900mm
- **B** = a richiesta
- **C** = a richiesta
- **D** = a richiesta

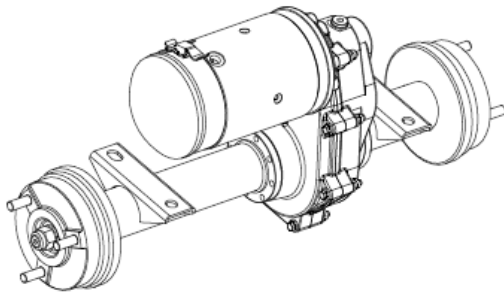
English

SPECIFICATIONS:

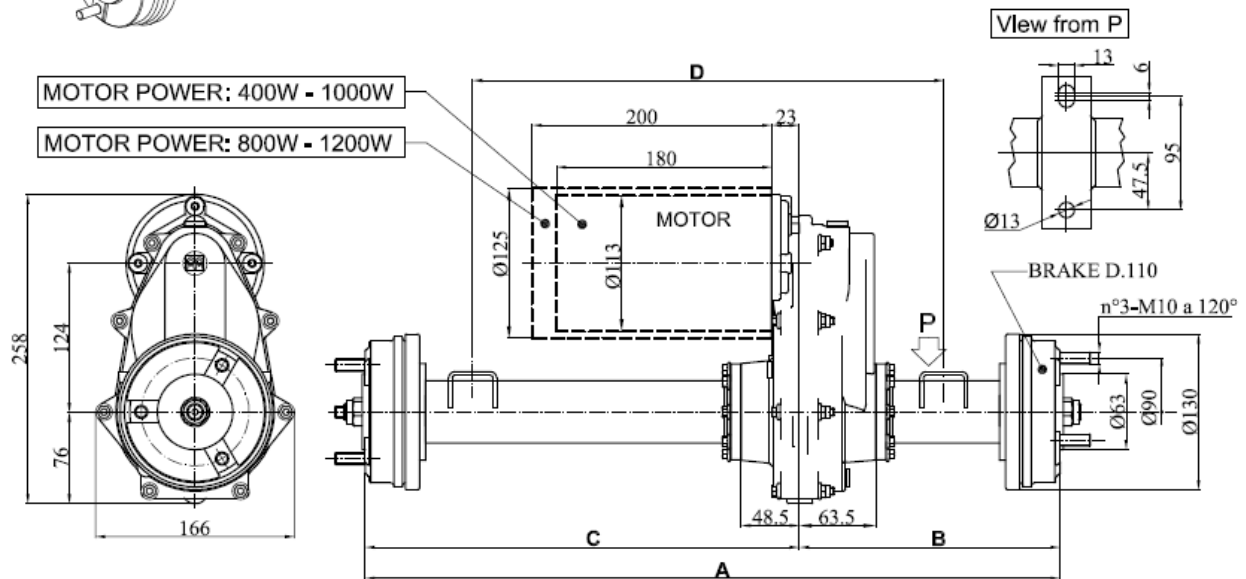
- Motor up to 1500W - 24V/36V/48V
- Maximum output torque 400Nm
- Standard gear ratios: 10:1 - 15:1 - 20:1 - 25:1 - 32:1
- Axle for rear drive for loads up to 300kg
- Wheel fitting: with flange
- Track according to customer's requirements

DIMENSIONS TO DRAW:

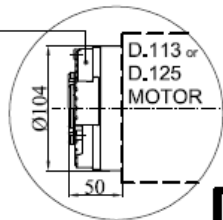
- **A** = min.400mm - max.900mm
- **B** = according to customer's requirements
- **C** = according to customer's requirements
- **D** = according to customer's requirements



S21-110



OPTIONAL
- FRENO ELETTROMAGNETICO 10Nm
- ELECTROMAGNETIC BRAKE 10Nm



Italiano

DATI TECNICI:

- Motore fino a 1500W - 24V/36V/48V
- Coppia massima in uscita 400Nm
- Rapporti di riduzione standard: 10:1 - 15:1 - 20:1 - 25:1 - 32:1
- Assale per trazione posteriore con carichi fino a 400kg
- Attacco alla ruota: tramite freno a tamburo meccanico con diametro frenata Ø110
- Carreggiata a richiesta cliente

MISURE A DISEGNO:

- **A** = min.400mm - max.900mm
- **B** = a richiesta
- **C** = a richiesta
- **D** = a richiesta

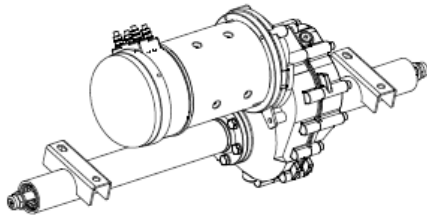
English

SPECIFICATIONS:

- Motor up to 1500W - 24V/36V/48V
- Maximum output torque 400Nm
- Standard gear ratios: 10:1 - 15:1 - 20:1 - 25:1 - 32:1
- Axle for rear drive for loads up to 400kg
- Wheel fitting: with mechanical drum brakes with Ø110 braking diameter
- Track according to customer's requirements

DIMENSIONS TO DRAW:

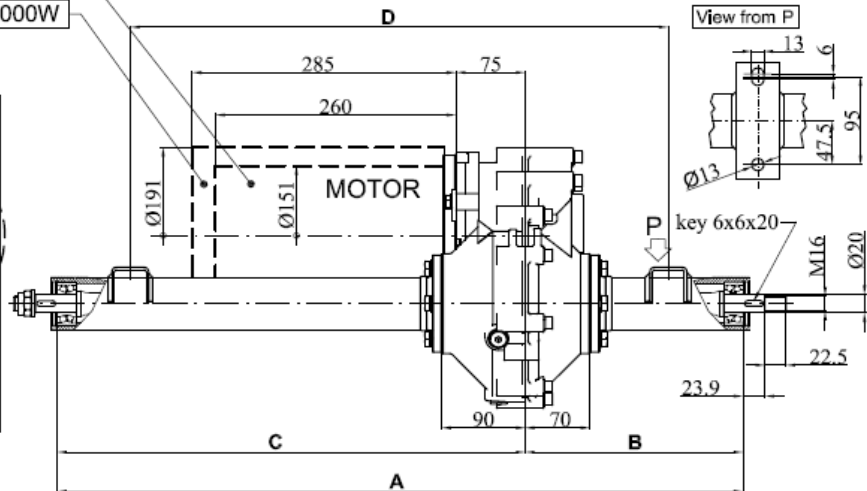
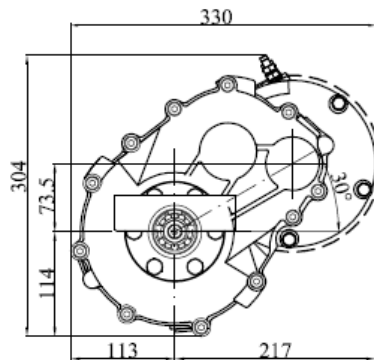
- **A** = min.400mm - max.900mm
- **B** = according to customer's requirements
- **C** = according to customer's requirements
- **D** = according to customer's requirements



S40-ME

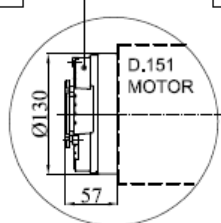
MOTOR POWER: 1500W - 3000W

MOTOR POWER: 3000W - 6000W

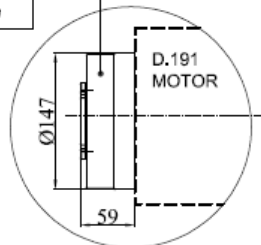


View from P

OPTIONAL
- FRENO ELETTROMAGNETICO 20Nm
- ELECTROMAGNETIC BRAKE 20Nm



OPTIONAL
- FRENO ELETTROMAGNETICO 40Nm
- ELECTROMAGNETIC BRAKE 40Nm



Italiano

DATI TECNICI:

- Motore fino a 6000W - 24V/36V/48V/72V/80V
- Coppia massima in uscita 900Nm
- Rapporti di riduzione standard: 10:1 - 12:1 - 13:1 - 15:1 - 16:1 - 18:1 - 20:1
- Assale per trazione posteriore con carichi fino a 850kg
- Attacco alla ruota: tramite albero
- Carreggiata a richiesta cliente

MISURE A DISEGNO:

- **A** = min. 800mm - max. 1150mm
- **B** = a richiesta
- **C** = a richiesta
- **D** = a richiesta

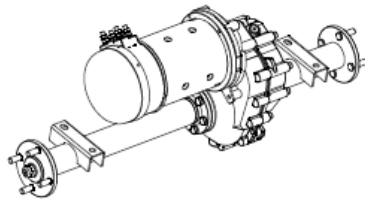
English

SPECIFICATIONS:

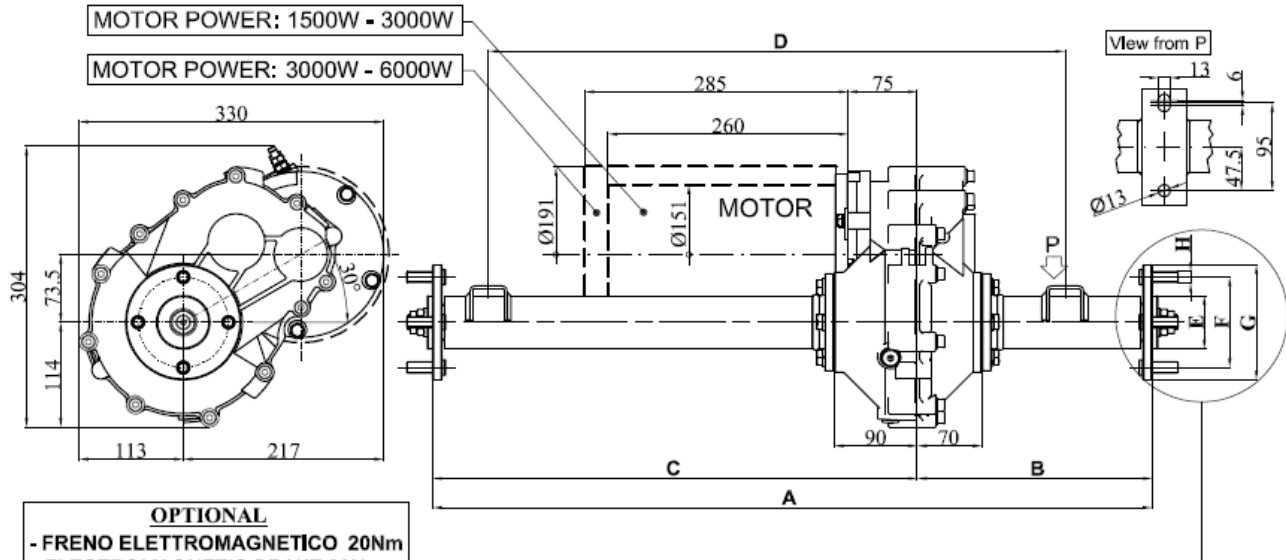
- Motor up to 6000W - 24V/36V/48V/72V/80V
- Maximum output torque 900Nm
- Standard gear ratios: 10:1 - 12:1 - 13:1 - 15:1 - 16:1 - 18:1 - 20:1
- Axle for rear drive for loads up to 850kg
- Wheel fitting: with shaft
- Track according to customer's requirements

DIMENSIONS TO DRAW:

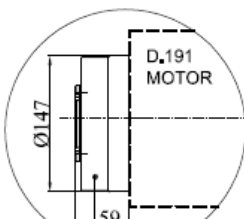
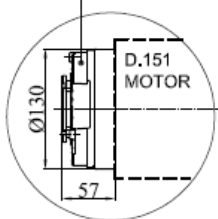
- **A** = min. 800mm - max. 1150mm
- **B** = according to customer's requirements
- **C** = according to customer's requirements
- **D** = according to customer's requirements



S40-ME



Tipo differenziale Differential type	Tipo flangia Flange type	BALILLA	BMW	FIAT	VESPA 4
SERIE 11	E	62	60	58	52
SERIE 21	F	95	100	98	70
SERIE 40	G	128	128	128	93
	H	n°4 - M12x1,5	n°4 - M16x1,5	n°4 - M12x1,5	n°4 - M10x1,5



OPTIONAL
- FRENO ELETTROMAGNETICO 40Nm
- ELECTROMAGNETIC BRAKE 40Nm

Italiano

DATI TECNICI:

- Motore fino a 6000W - 24V/36V/48V/72V/80V
- Coppia massima in uscita 900Nm
- Rapporti di riduzione standard: 10:1 - 12:1 - 13:1 - 15:1 - 16:1 - 18:1 - 20:1
- Assale per trazione posteriore con carichi fino a 850kg
- Attacco alla ruota: tramite flange
- Carreggiata a richiesta cliente

MISURE A DISEGNO:

- A = min.800mm - max.1150mm
- B = a richiesta
- C = a richiesta
- D = a richiesta

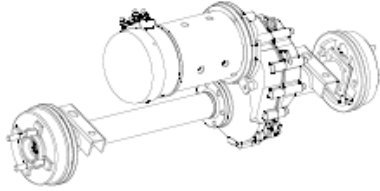
English

SPECIFICATIONS:

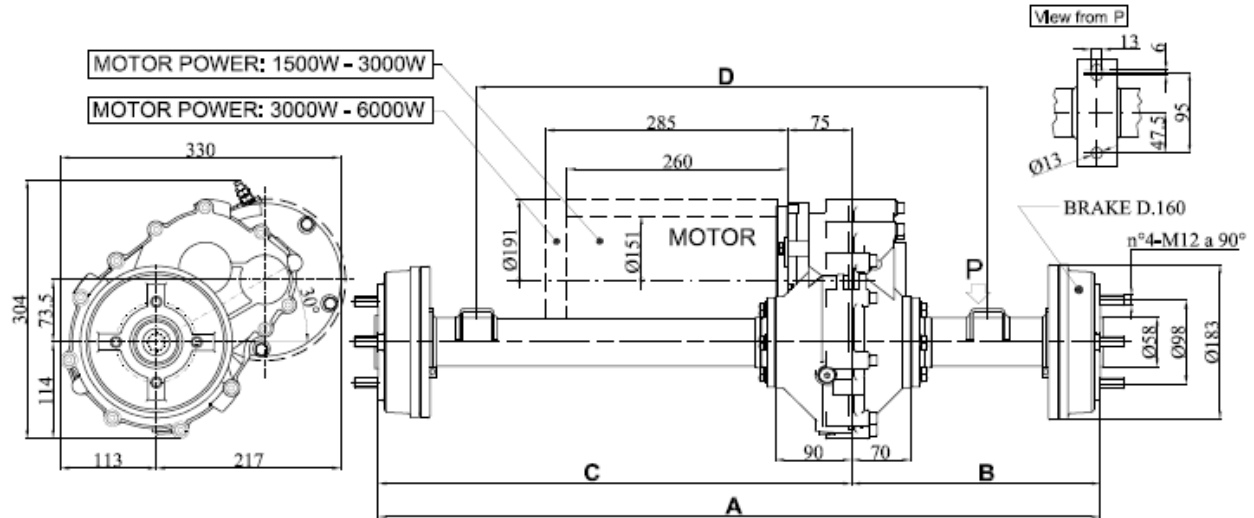
- Motor up to 6000W - 24V/36V/48V/72V/80V
- Maximum output torque 900Nm
- Standard gear ratios: 10:1 - 12:1 - 13:1 - 15:1 - 16:1 - 18:1 - 20:1
- Axle for rear drive for loads up to 850kg
- Wheel fitting: with flange
- Track according to customer's requirements

DIMENSIONS TO DRAW:

- A = min.800mm - max.1150mm
- B = according to customer's requirements
- C = according to customer's requirements
- D = according to customer's requirements

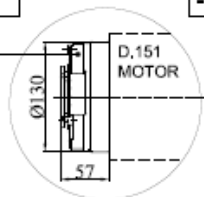


S40-160



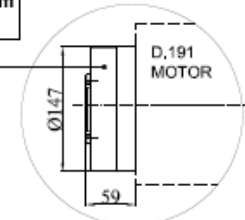
OPTIONAL

- FRENO ELETTROMAGNETICO 20Nm
- ELECTROMAGNETIC BRAKE 20Nm



OPTIONAL

- FRENO ELETTROMAGNETICO 40Nm
- ELECTROMAGNETIC BRAKE 40Nm



Italiano

DATI TECNICI:

- Motore fino a 6000W - 24V/36V/48V/72V/80V
- Coppia massima in uscita 900Nm
- Rapporti di riduzione standard: 10:1 - 12:1 - 13:1 - 15:1 - 16:1 - 18:1 - 20:1
- Assale per trazione posteriore con carichi fino a 850kg
- Attacco alla ruota: tramite freno a tamburo meccanico con diametro frenata Ø160
- Carreggiata a richiesta cliente

MISURE A DISEGNO:

- A = min.800mm - max.1150mm
- B = a richiesta
- C = a richiesta
- D = a richiesta

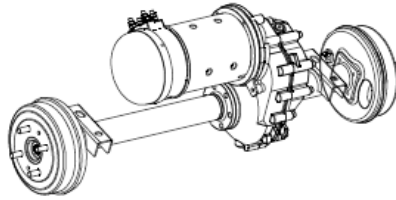
English

SPECIFICATIONS:

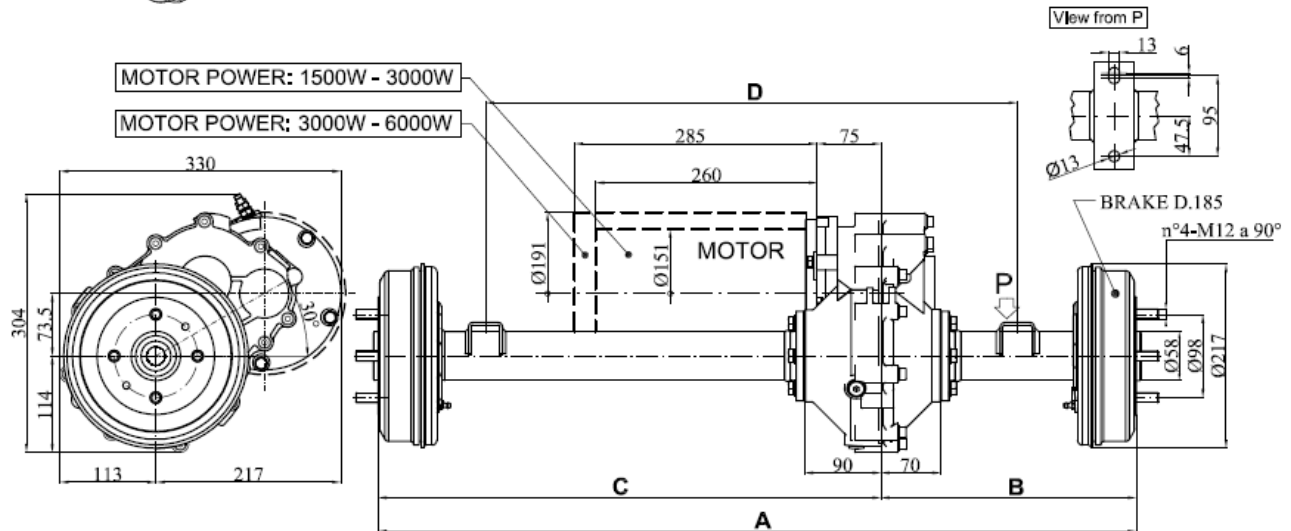
- Motor up to 6000W - 24V/36V/48V/72V/80V
- Maximum output torque 900Nm
- Standard gear ratios: 10:1 - 12:1 - 13:1 - 15:1 - 16:1 - 18:1 - 20:1
- Axle for rear drive for loads up to 850kg
- Wheel fitting: with mechanical drum brakes with Ø160 braking diameter
- Track according to customer's requirements

DIMENSIONS TO DRAW:

- A = min.800mm - max.1150mm
- B = according to customer's requirements
- C = according to customer's requirements
- D = according to customer's requirements

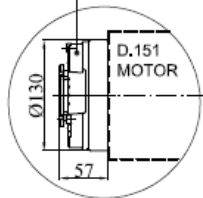


S40-185



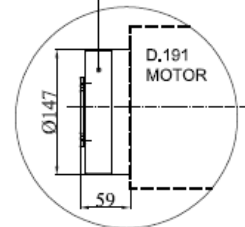
OPTIONAL

- FRENO ELETTROMAGNETICO 20Nm
- ELECTROMAGNETIC BRAKE 20Nm



OPTIONAL

- FRENO ELETTROMAGNETICO 40Nm
- ELECTROMAGNETIC BRAKE 40Nm



Italiano

DATI TECNICI:

- Motore fino a 6000W - 24V/36V/48V/72V/80V
- Coppia massima in uscita 900Nm
- Rapporti di riduzione standard: 10:1 - 12:1 - 13:1 - 15:1 - 16:1 - 18:1 - 20:1
- Assale per trazione posteriore con carichi fino a 1200kg
- Attacco alla ruota: tramite freno a tamburo meccanico con diametro frenata Ø185
- Carreggiata a richiesta cliente

MISURE A DISEGNO:

- A = min.800mm - max.1150mm
- B = a richiesta
- C = a richiesta
- D = a richiesta

English

SPECIFICATIONS:

- Motor up to 6000W - 24V/36V/48V/72V/80V
- Maximum output torque 900Nm
- Standard gear ratios: 10:1 - 12:1 - 13:1 - 15:1 - 16:1 - 18:1 - 20:1
- Axle for rear drive for loads up to 1200kg
- Wheel fitting: with mechanical drum brakes with Ø185 braking diameter
- Track according to customer's requirements

DIMENSIONS TO DRAW:

- A = min.800mm - max.1150mm
- B = according to customer's requirements
- C = according to customer's requirements
- D = according to customer's requirements